



OCTOBER 2016

## MELTON HIGHWAY, SYDENHAM

# How we assessed the project

### PROJECT OVERVIEW

Melton Highway is a busy road with more than 38,000 vehicles travelling along it every weekday. The road intersects with the Sunbury Rail Line approximately 800 metres north of Watergardens train station.

More than 150 passenger trains travel through the level crossing each day, causing the boom gates to be down for over 24 minutes during the two hour morning weekday peak.

This results in:

- conflicting demands of rail, road and pedestrian traffic at the level crossing causing delays
- rail corridors and boom gate closures contributing to divided suburbs and reducing local amenity
- frustration at level crossing delays leading to risky behaviour by drivers, cyclists and pedestrians.

Removing this level crossing will improve productivity by helping to create a more reliable and efficient transport network. It will create better connected communities and contribute to making the west a safer place to live and travel.

### Option Assessment

The following options were assessed at this location:

- rail under road
- road under rail
- road over rail
- rail over road
- road closure
- hybrid treatments.

Removing 50 dangerous and congested level crossings will transform the way people live, work and travel across metropolitan Melbourne and improve safety for drivers and pedestrians.

### CONTACT US

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## MULTI CRITERIA EVALUATION

To assess the feasibility of each option, a process called multi-criteria analysis was used. This means, different criteria that cover key areas such as safety, transport efficiency, connectivity and local amenity, estimated cost, land use impacts, environmental impacts, construction impacts, delivery timeframe and future proofing were used to provide an overall assessment of each particular option.

The **road under rail** and **rail under road** options were not considered feasible following the initial options assessment, due to the following factors:

- impacts to Federal and State protected flora species (Spiny Rice Flower);
- excavation through the Taylors Creek crossing of Melton Highway would adversely impact the environment;
- conflicts with the Taylors Creek heritage bluestone culvert north of the level crossing;
- a high water table and the proximity of Taylors Creek would require a pumping/syphon system to prevent the road from flooding;
- shallow dense basalt rock, making excavation costly and time consuming to achieve necessary clearances (8-9 metres) below structures;
- undesirable vertical road grade (6%) to maintain the Overton Lea Boulevard intersection;
- impacts to the Watergardens Shopping Centre access east of the level crossing;
- extended rail and road closures would be required;
- major impacts to various utility services.

Two options – **road over rail** and **rail over road** – progressed into the detailed assessment stage.

During this phase, further analysis based on the criteria was undertaken to gain a more detailed understanding of the options and how it may apply in the area. When assessed against the feasibility criteria, the main distinctions fell into four of the criteria – construction impacts, environmental impacts, delivery timeframe and estimated cost. Following this assessment and consideration of community feedback, road over rail was determined to be the most feasible option.

## CONSTRUCTION IMPACTS

Due to the width of the road corridor, **Melton Highway traffic can be maintained while construction of the road over rail option is undertaken.** Combined with a limited number of short-term rail closures, this will minimise impacts to the more than 150 trains that use the Sunbury Line every weekday.

While the **road over rail** option will have an impact on local road access to Sydenham Road and Victoria Street, traffic impact assessments have confirmed the existing road network can cater for this change.

In comparison, the **rail over road** option would require rail closures of around three months duration, resulting in significant disruption to rail services.

Also, the **rail over road** option would adversely impact the current train stabling yards south of the crossing, resulting in the need to reconstruct a new stabling yard in an alternative location.

To meet design standards, the **rail over road** option would also potentially impact the Watergardens station, requiring remedial works and potential station reconstruction.

## ENVIRONMENTAL IMPACTS

Adverse environmental impacts are minimised with the road over rail option, as the areas of significant ecological value within the rail corridor can be avoided during construction.

Comparatively, the rail over road option would result in a significant impact to protected flora requiring the need for federal and state approvals. A detailed ecology assessment of the site recorded the presence of protected plants, which would require relocation prior to construction.

## DELIVERY TIMEFRAME

To obtain the necessary approvals under Federal and State environmental legislation for the protected flora and vegetation communities located within the rail corridor, a 12-18 month approval period would be required prior to construction commencing for the rail over road option.

Comparatively, the rail over road solution would involve major construction works on the rail line, resulting in an extended program with significant disruption to rail services on the Sunbury rail line.

## ESTIMATED COST

The likely cost of the rail over road option also significantly exceeds the estimated cost to construct the road over rail option.